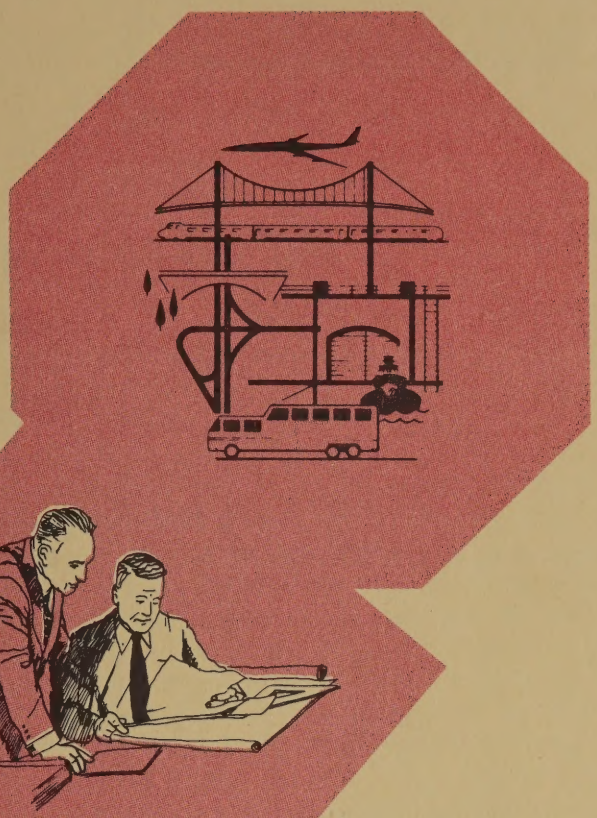
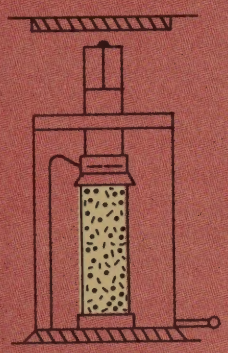
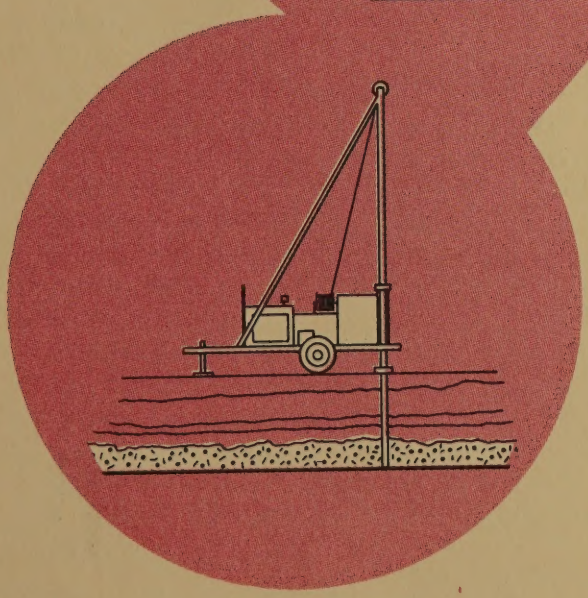
STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

RAYMOND T. SCHULER, COMMISSIONER

SOIL MECHANICS BUREAU







TEST WELL REPORT
KERHONKSON MAINTENANCE SITE
CONTRACT LD 75-4
ULSTER COUNTY
PIN 8800.51.301

OCTOBER, 1975

SM 238b (1/73)

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

DATE October 15, 1975

SUBJECT TEST WELL
KERHONKSON MAINTENANCE SITE
ULSTER COUNTY, PIN 8800.51-301

FROM A. Yatsevitch, Senior Engineering Geologist

TO E. M. Moody, Associate Soils Engineer

On May 23, 1975 this writer met with Mr. Fred Zimmer (Asst. Engineer, Region 8) and Mr. Stewart DeWitt (E.I.C.) at the project site to locate the proposed well. The location specified in the October 15, 1974 letter from A. B. Klussendorf (Senior Engineering Geologist) to B. E. Butler (Associate Soils Engineer) did not appear the most advantageous placement for several reasons - the most serious of which was its position on the opposite side of the proposed leaching field as shown on the O.G.S. Well Location Map dated September 25, 1974. (Conversation with Mr. Klussendorf confirmed that the leaching field location was not available to him at the time he specified the well location). This writer contacted O.G.S. through Mr. W. Bellerjeau (Senior Soils Engineer) on June 5, 1975 and obtained a revised Well Location Map dated June 2, 1975 which indicated a new proposed location for the well. Mr. S. DeWitt was contacted concerning the change and he staked out the new location which fell in an area which was in the process of being filled to an elevation some seven to ten feet higher.

With this latest information in hand, this writer, on June 12, 1975, attended a pre-construction meeting in the offices of Mr. L. Leonard (Construction Group, Region 8) with Mr. S. DeWitt (E.I.C.) and Mr. C. Richardson of Tallman Drilling Corp. (Contractor). The notes of the meeting by L. F. Leonard, dated June 13, 1975, are attached. Discussions therein pertaining to casing extensions and related items are based on the location in the fill area. A starting date of June 16, 1975, (the following Monday) was agreed upon.

Shortly after the meeting additional information obtained in the Regional office indicated that the latest location for the well was probably on an old dumping ground complete with large void spaces and possibly an old salt storage area, as well as being located over the old stream channel. Mr. Bellerjeau was contacted again as liaison with O.G.S. and confirmed the flexibility of the leaching field locations by his memorandum to B. E. Butler, dated June 13, 1975. Mr. S. DeWitt was subsequently informed that the well location was again to be changed and was given a choice of acceptable locations. He met with Mr. Jim Pierson (Ulster County Resident Engineer) on the site on the morning of June 16, 1975 and decided on the final and present location of the well. Later that morning the Contractor arrived and started drilling the well. Mr. Richard Cross (Junior Engineering Geologist) attended the construction of the well at the request of the E.I.C. His report is attached, as is a log of the well samples made up by this writer.

Also attached are a copy of the pumping test and the results of the water quality analysis performed by D.O.H.

AY:BR
Attachments

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

DATE October 27, 1975

SUBJECT TEST WELL CONSTRUCTION REPORT
KERHONKSON MAINTENANCE SITE
PIN 8800.51-301

FROM R. H. Cross, Jr. Engineering Geologist RHC

TO E. M. Moody, Associate Soils Engineer

On June 16, 1975, at the request of Mr. S. DeWitt (E.I.C.) this writer went to the project site for the purpose of assisting Mr. DeWitt and Mr. J. Motzer (Inspector) in the construction of the proposed test well. Mr. C. Richardson (Driller for Tallman Drilling Corp.) set up his rig and drilled a 12" oversize hole to a depth of 20 feet. Twenty feet of 12" temporary casing was installed and an 8" hole was then drilled to a depth of 275 feet, using mud. The last 5 feet of the hole was drilled into rock.

On June 17, 1975 the 12" temporary casing was removed and 277 feet of 6" casing was installed. A 12" plate ring welded to a coupling was used at the last pipe joint to prevent grout from flowing farther down the hole during the grouting operation. Mud was used to hold the 12" portion of the hole open during subsequent drilling operations. The casing was cleaned and drilling resumed using air and water. Drilling continued in sandstone to a depth of 313 feet where water was encountered at a flow of about 20 GPM. At this point it was decided to continue drilling to insure adequate storage capacity. Drilling was terminated at 338 feet and the casing was seated. Development, using air, was started and continued for one-half hour at which time operations ceased for the day.

On June 18, 1975 at the start of work the static water level was at ground surface level. The casing seating was checked and development was resumed. Development continued for 6 hours. During this time the water cleared noticeably but not completely. At this time the well was chlorinated, recirculated for one hour and capped pending later pump testing. The casing was then grouted.

On June 25, 1975 the well was flowing slightly but no attempt was made to measure the rate of flow. A. Meyers 1½ H.P. pump was installed at the 320 foot level and pumping was started to further develop and clarify the well. An air tube was installed with the pump to aid in determining drawdown. The pumping rate was gradually increased and after 5½ hours it was 17.1 GPM. At this time the water appeared to be clear and the 12 hour pump test was started. At both the start and conclusion of the pump test a strong sulphur odor was present. A summary of the pump test is attached.

On June 26, 1975 following completion of the pump test water samples were taken for submission to Department of Health in Albany. The Contractor removed his pump and after approval by the Inspector left the site. A shop-made well cap, approved by the E.I.C., was left with this writer by the Contractor for installation following the taking of recovery readings. This cap was installed and the Contractor has made arrangements to have it tack-welded to the casing to provide a tamperproof seal.

RC:BR
Attachment

MEMORANDUM

DATE October 27, 1973 DEPARTMENT OF TRANSPORTATION

SUBJECT TEST WELL CONSTRUCTION REPORT
KENNEBUNK MAINTENANCE SITE
FIN 8800.31-101

FROM R. M. Cross, Jr. Engineering Geologist

TO S. M. Moody, Associate Soils Engineer

On June 16, 1973, at the request of Mr. S. Davies (F.I.C.) this writer went to the project site for the purpose of assisting Mr. Dewart and Mr. J. Morse (Inspector) in the construction of the proposed test well. Mr. C. Richardson (Driller for Atlantic Drilling Corp.) set up his rig and drilled a 17" overbrite hole to a depth of 30 feet. Twenty feet of 12" temporary casing was installed and an 8" hole was then drilled to a depth of 275 feet, using rock. The last 5 feet of the hole was drilled into rock.

On June 17, 1973 the 12" temporary casing was removed and 277 feet of 6" casing was installed. A 12" plate cap welded to a coupling was used as the last pipe joint to prevent grout from flowing further down the hole during the grouting operation. Mud was used to hold the 12" portion of the hole open during subsequent drilling operations. The casing was cleaned and drilling resumed using air and water. Drilling continued in sandstone to a depth of 313 feet where water was encountered at a flow of about 20 GPM. At this point it was decided to continue drilling to insure adequate storage capacity. Drilling was terminated at 336 feet and the casing was seated. Development, using air, was started and continued for one-half hour at which time operations ceased for the day.

On June 18, 1973 at the start of work the static water level was at ground surface level. The casing seating was checked and development was resumed. Development continued for 5 hours. During this time the water cleared noticeably but not completely. At this time the well was chlorinated, recirculated for one hour and capped pending later pump testing. The casing was then grouted.

On June 25, 1973 the well was flowing slightly but no attempt was made to measure the rate of flow. A. Meyers, Inc. pump was installed at the 320 foot level and pumping was started, initiating valving and clarify the well. An air line was installed with the pump to aid in accomplishing drawdown. The pumping rate was gradually increased and after 3½ hours it was 14.1 GPM. At this time the water appeared to be clear and the 12 hour pump test was started. At both the start and termination of the pump test a strong sulphur odor was present. A summary of the pump test is attached.

On June 26, 1973 following completion of the pump test water samples were taken for submission to Department of Health in Augusta. The contractor removed his pump and after approval by the Inspector left the site. A dry-hole well cap, approved by the E.I.C., was left with the water by the Contractor for installation following the taking of recovery readings. This cap was installed and the Contractor has made arrangements to have it tack-welded to the casing to provide a tamperproof seal.

SCCCS

Attachment

KERHONKSON WELL
LOG OF WELL SAMPLES
(MUD DRILLING USED)

0-1'	Gravel with sandy silt. Gravel particles up to 1 inch; mostly brownish/greenish/gray sandstone.
5'	Lt. gray clay.
10'	Lt. gray clay.
15'	Lt. gray/brownish gray clay.
20'	Lt. gray/brownish gray clay.
25'	Lt. gray/brownish gray clay.
30'	Lt. gray/brownish gray clay.
35'	Lt. gray/brownish gray silty clay.
40'	Med. gray/brownish gray silty clay.
45'	Lt. & Med. gray clay.
50'	Med. gray clayey silt.
55'	Lt. to Med. gray silty clay.
60'	Med. gray/brownish gray silty clay.
65'	Med. gray/brownish gray silty clay.
70'	Med. gray/brownish gray silty clay.
75'	Med. gray/brownish gray silty clay.
80'	Med. gray/brownish gray silty clay.
85'	Lt. gray silty clay.
90'	Lt. gray silty clay.
95'	Lt. gray silty clay.
100'	Lt. gray/brownish gray silty clay.
105'	Lt. brownish gray silty clay.
110'	Lt. brownish gray clayey silt.
115'	Lt. brownish gray clayey silt.
120'	Lt. brownish gray clayey silt.
125'	Med. brownish gray clayey silt.
130'	Med. brownish gray clayey silt.
135'	Med. brownish gray clayey silt.
140'	Med. brownish gray clayey silt.
145'	Med. brownish gray clayey silt.
150'	Med. brownish gray clayey silt.
155'	Med. brownish gray clayey silt.
160'	Med. gray clayey silt.
165'	Med. brownish gray clayey silt.
170'	Med. brownish gray clayey silt.
175'	Med. brownish gray clayey silt.
180'	Med. brownish gray clayey silt.
185'	Med. brownish gray clayey silt.
190'	Med. gray clayey silt.
195'	Med. brownish gray fine sandy silt.
200'	Med. brownish gray fine sandy silt.
205'	Med. brownish gray fine sandy silt.
210'	Med. brownish gray fine sandy silt.
215'	Med. brownish gray fine sandy silt.
220'	Med. brownish gray fine sandy silt
225'	Med. brownish gray fine sandy silt.
230'	Med. brownish gray fine sandy silt.
235'	Med. gray fine sandy clayey silt.
240'	Med. gray fine sandy clayey silt.
245'	Med. gray fine sandy silt. Fine stone chips.

KEYHOMESON WELL
LOG OF WELL SAMPLES
(MOD DRILLING USED)

0-1'		Gravel with sandy silt. Gravel particles up to 1 inch; mostly brownish/greenish/gray sandstone.
5'	Lt.	gray clay.
10'	Lt.	gray clay.
15'	Lt.	gray/brownish gray clay.
20'	Lt.	gray/brownish gray clay.
25'	Lt.	gray/brownish gray clay.
30'	Lt.	gray/brownish gray clay.
35'	Lt.	gray/brownish gray silty clay.
40'	Med.	gray/brownish gray silty clay.
45'	Lt. & Med.	gray clay.
50'	Med.	gray clayey silt.
55'	Lt. to Med.	gray silty clay.
60'	Med.	gray/brownish gray silty clay.
65'	Med.	gray/brownish gray silty clay.
70'	Med.	gray/brownish gray silty clay.
75'	Med.	gray/brownish gray silty clay.
80'	Med.	gray/brownish gray silty clay.
85'	Lt.	gray silty clay.
90'	Lt.	gray silty clay.
95'	Lt.	gray silty clay.
100'	Lt.	gray/brownish gray silty clay.
105'	Lt.	brownish gray silty clay.
110'	Lt.	brownish gray clayey silt.
115'	Lt.	brownish gray clayey silt.
120'	Lt.	brownish gray clayey silt.
125'	Med.	brownish gray clayey silt.
130'	Med.	brownish gray clayey silt.
135'	Med.	brownish gray clayey silt.
140'	Med.	brownish gray clayey silt.
145'	Med.	brownish gray clayey silt.
150'	Med.	brownish gray clayey silt.
155'	Med.	brownish gray clayey silt.
160'	Med.	gray clayey silt.
165'	Med.	brownish gray clayey silt.
170'	Med.	brownish gray clayey silt.
175'	Med.	brownish gray clayey silt.
180'	Med.	brownish gray clayey silt.
185'	Med.	brownish gray clayey silt.
190'	Med.	gray clayey silt.
195'	Med.	brownish gray fine sandy silt.
200'	Med.	brownish gray fine sandy silt.
205'	Med.	brownish gray fine sandy silt.
210'	Med.	brownish gray fine sandy silt.
215'	Med.	brownish gray fine sandy silt.
220'	Med.	brownish gray fine sandy silt.
225'	Med.	brownish gray fine sandy silt.
230'	Med.	brownish gray fine sandy silt.
235'	Med.	gray fine sandy clayey silt.
240'	Med.	gray fine sandy clayey silt.
245'	Med.	gray fine sandy silt. Fine stone chips.

250'	Med. gray fine sandy silt.
255'	Med. gray fine sandy silt.
260'	Med. gray fine sandy silt.
265'	Med. brownish gray fine sandy silt.
270'	Med. brownish gray clayey silt.
	TOP OF ROCK
275'	Med. gray fine grained quartz sandstone.
277'	Med. brownish gray fine grained dirty quartz sandstone.
280'	Med. gray/greenish gray/whitish gray fine grained quartz sandstone.
285'	Lt. gray/whitish fine grained quartz sandstone.
290'	Dk. gray/med. gray/greenish gray fine grained quartz sandstone.
295'	Med. gray/dark gray fine grained quartz sandstone. Pyrite.
300'	Lt. gray fine grained sandstone & Lt. greenish gray shaley siltstone. Pyrite.
305'	Lt. gray fine grained quartz sandstone.
310'	Lt. gray/ med. gray fine grained quartz sandstone.
315'	Lt. gray/ med. gray fine grained sandstone. Dk. brownish gray shaley fine grained sandstone. Pyrite.
320'	Med. gray/greenish gray fine grained sandstone. Pyrite.
325'	Med. gray fine grained quartz sandstone.
330'	Lt. gray/ med. gray fine grained quartz sandstone.
335'	Med. gray fine to medium grained quartz sandstone.

END OF LOG & WELL 6/23/75

AY:BR

June 13, 1975

ID 75-4 ULSTER COUNTY(PRECONSTRUCTION MEETING)
KEPHONSON: MAINTENANCE SITE
TEST WELL PIN 8300.51 301

L. F. Leonard, Construction Group, Region 8

Files

cc: Tallman Drilling Corp.
New York State Department of Labor
E. H. Haverly, EEO Unit, Rm. 417A, Bldg. 5
A. Yatsevitch, Soils Mec. Bureau, Rm. 213, Bldg. 5
S. DeWitt, Engineer-in-Charge

S.M.B.
LAM
WPM
SM
JJO
BM
EAM
EJB
VJM
DCH
RHB
FRI
EJW
JRH
FILE

A Preconstruction meeting was held in the Regional Office on June 12, 1975 at 10 a.m. with the following in attendance:

N.Y.S.D.O.T.	N.Y.S.D.O.T.(Albany)	Tallman Drilling Corp.
Mr. L. Leonard	Mr. A. Yatesevitch	Mr. C. Richardson
Mr. S. DeWitt		

The meeting began with the review by Mr. Yatesvitch of the technical aspects of this contract. The Contractor proposed to utilize a slurry mixture to retain the open well hole rather than a steel oversize casing for the top 26' of this well. The centering of the 6" casing will be accomplished by means of a spider device and concrete encasement pumped into the hole by normal procedures which will displace the slurry mixture. The Contractor was directed to submit a letter describing this proposed procedure. He stipulated that under this procedure he will provide a minimum of 12" outside diameter concrete encasement. Based on discussion and review, the Contractor's procedures fulfills the contract requirements.

The Contractor was advised that due to a proposed filling of the site that it is intended to leave a 10' extension of the 6" well casing above the existing ground line. Mr. DeWitt will check with the Maintenance Group to determine whether they can provide a sleeve for the concrete encasement above the ground line.

A discussion ensued regarding soil samples. An agreement was reached that samples will be taken every five (5) feet, starting 1' below the surface. The requirements for water testing as described in the proposal was reviewed for general information.

This concluded the discussion of the technical aspects of this contract and the following items were then discussed:

1. The requirements of the OSHA Law as it relates to New York State contracts and Mr. Richardson indicated familiarity with same and designated himself as safety officer for the project.

2. Requirements of New York State Labor Law were reviewed and the Contractor was advised requiring the necessity of employing New York State residents and of maintaining Form PW 17 on the project.

3. The EEO responsibilities were reviewed and since the project is of such a short nature and further since the Contractor indicated that the total work force will number three (3) people all of whom will be transfers all of the EEO Provisions are not applicable. However, the Engineer-in-Charge will monitor the applicable sections.

4. The distribution of correspondence was detailed as follows:

   To the Contractor: Tallman Drilling Corporation, RFD #2, Greenville, New York 12083

   To the State: S. DeWitt, RFD #1, Box 421A, Woodstock, New York 12498

5. The Contractor indicated that the first day of work will be June 16, 1975 as required in the letter of award.

6. Procedures concerning disputed work and agreed prices were briefly reviewed and the appropriate sections of the Specification book were referenced.

7. The requirements of Industrial Code 53 were reviewed for the Contractor's information and action.

The meeting concluded at 11:55 a.m.

AJB/LFL/ng

I.N. 8800.51 - 301

I.R. # 4 Sheet # 2
6/25 - 6/26/75

YIELD TEST

HOUR	YIELD (G.P.M.)	WATER LEVEL (AFTER TEST)
200	17.10	68.0'
230	16.50	70.0'
300	18.00	76.0'
330	17.10	79.0'
400	17.50	82.0'
430	17.50	84.0'
500	17.50	85.0'
530	17.50	86.0'
600	17.50	88.0'
630	17.50	88.5'
700	17.50	89.0'
730	17.50	90.0'
800	17.40	90.5'
830	17.40	91.0'
900	17.40	91.0'
930	17.20	91.5'
600	17.10	91.5'
630	17.10	93.5'
700	17.10	94.0'
730	17.10	94.0'
800	17.50	95.0'
830	17.50	95.5'
900	17.50	96.0'
930	17.50	97.0'
000	17.50	97.0'

Average yield 17.40 G.P.M. with a total drawdown of 97.0'

) 75-4 Ulster County
Proposed Maintenance Site at Kerhonkson,
(Resident Engineer's Sub-Headquarters) Route 209
P.I.N. 8800.51 - 301

Inspected By:
S. H. DeWitt
E.I.C.

TEST WELL
KERHONKSON MAINTENANCE SITE
ULSTER COUNTY, PIN 8800.51-301